

Excellent because mobile, or mobile because excellent?

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Abstract: In the European Higher Education and Research Area, the belief that mobility and excellence are correlated has led to a range of mobility schemes and incentives at European and national level, as well as within institutional policies and funding agencies. This paper argues that the “mobility stimulates excellence” principle does not always apply. An investigation of the outcomes of mobility is necessary to differentiate between the various outcomes of researchers’ mobility, and to make sure that the “mobility mantra” does not work counterproductively. As such, mobility incentives could be designed to be more effective and meet the proposed objectives.

The European Research Area and researchers’ mobility

Knowledge transfer and knowledge sharing are some of the key elements in the Lisbon strategy designed to make Europe into one of the most dynamic knowledge economies in the world (European Commission, 2000). The circulation of knowledge leads to new advances in research as well as new applications of research. This transfer can take place either in the form of “products of science”, e.g. scientific papers which are published and can be distributed and circulated; or in the form of “science potential” – i.e. researchers’ brains which may yield products or not, and may be mobile, or may not.

The Lisbon strategy aiming to create a high-level European Research Area, envisaged a region in which this knowledge and knowledge potential might circulate freely. The expected outcome of this exchange would be an increase in vitality and quality of research (European Commission, 2001). The product of intellectual pursuits had already started to circulate more intensely in international scientific journals, due to an increased emphasis on publishing academic output and intensified ‘virtual’ collaboration of researchers through co-authored papers (Van Leeuwen, 2009; Enders & Musselin, 2008). However, it was not only the product but also the potential for innovation – i.e. highly skilled intellectuals – that was due to receive a boost. An increase in numbers was needed, as well as a more open research area without geographical barriers to researchers’ intellectual pursuits. This upward movement, then, was expected to turn Europe into a region so attractive that the best researchers would choose to come to, or to remain in one of the European countries (European Commission, 2007, 2008).

The impact of this ambition has not been the same for every academic system. Countries with a high degree of interuniversity and international mobility amongst students and staff have needed to implement relatively few structural changes or revise educational legislation or recruitment policies, as they were used to recruiting internationally. Their researchers, too, had long been used to travelling reasonable distances in order to obtain a place at university as a student, or a position at university as an academic. The best examples of such ‘open’ systems of recruitment in academia were/are typically to be found in the UK (outside of Europe, the US would be the prime example). Institutions with top-level status, too, had a tradition of catering for highly-mobile staff as well as being able to attract and retain the best talent from around the world in an international environment. Inspired by the competitive advantage of such academic institutions and academic systems, and encouraged furthermore by the Lisbon ambitions, countries with a traditionally “closed

system” of higher education recruitment recognized the need to adapt their university systems (Cruz-Castro & Sanz-Menendez, 2010). All of them, after all, were engaged in the same competition for scientific excellence and shared a strong positive bias for international exchange and mobility of faculty (Enders, 2008).

Although academic culture, as opposed to other work environments, had for centuries been characterized by a fairly high level of mobility, modern-day globalization introduced a new type of correlation between mobility and excellence. As top-level institutions such as Oxford, Cambridge and the Swiss Federal Institute of Technology (ETH Zurich), were able to attract a wide range of excellent researchers from all over the world, a researcher’s mobility experience began to be regarded as an inevitable rite of passage into a successful academic career. Likewise, a university which was able to attract a large share of foreign researchers, became a model for harbouring excellent research.

Belgium, just like Germany, France and Spain (Enders & Musselin, 2008), set up a range of initiatives in order to support researchers’ mobility and to transform, step-by-step, their universities to more open institutions of knowledge. The European Charter for Researchers and the Code of Conduct for the recruitment of Researchers, was designed as an instrument to implement best practices of Human Resources in Research throughout Europe and guide universities in this transformation. New measures in such “academic systems in transition” ranged from introducing funding schemes to attract top-level researchers, to changing legislation on migration for the highly-skilled, altering language regulations and introducing mobility funding for young researchers. Although the institutional level did not determine an individual researcher’s behaviour, conditions such as available funding, recruitment procedures and national legislation did have an impact on mobility patterns.

Flanders as case study: various data on researchers’ mobility

Promoting the mobility of researchers was strongly recommended by the Flemish Science Policy Council (VRWB 1998a (first policy document) up to VRWB 2008 (most recent policy document), and was given priority treatment in the Flemish government’s science policy in 2009 (Vlaamse Regering 2009). Universities began to communicate more intensely through English with the global world (websites, information booklets), the major research funding agencies in Flanders, FWO, as well as universities themselves, provided mobility scholarships for short-term and long-term mobility, and universities reserved budgets and staff time to promote internationalization, to attract foreign students and staff, and to find creative solutions for administrative barriers. From 2008 onwards, the interuniversity research allocation key also rewarded universities for appointing internationally mobile staff.

This paper focuses particularly on researchers in Flanders and draws on material from a number of research projects related to researchers’ mobility. Evidence from these projects illustrates the wide-ranging effects – wanted as well as unwanted – of the current focus on mobility in a researcher’s career:

- (1) “Human Resources in Research – Flanders” – a database of academic researchers in Flanders; first analyses published in June 2010.

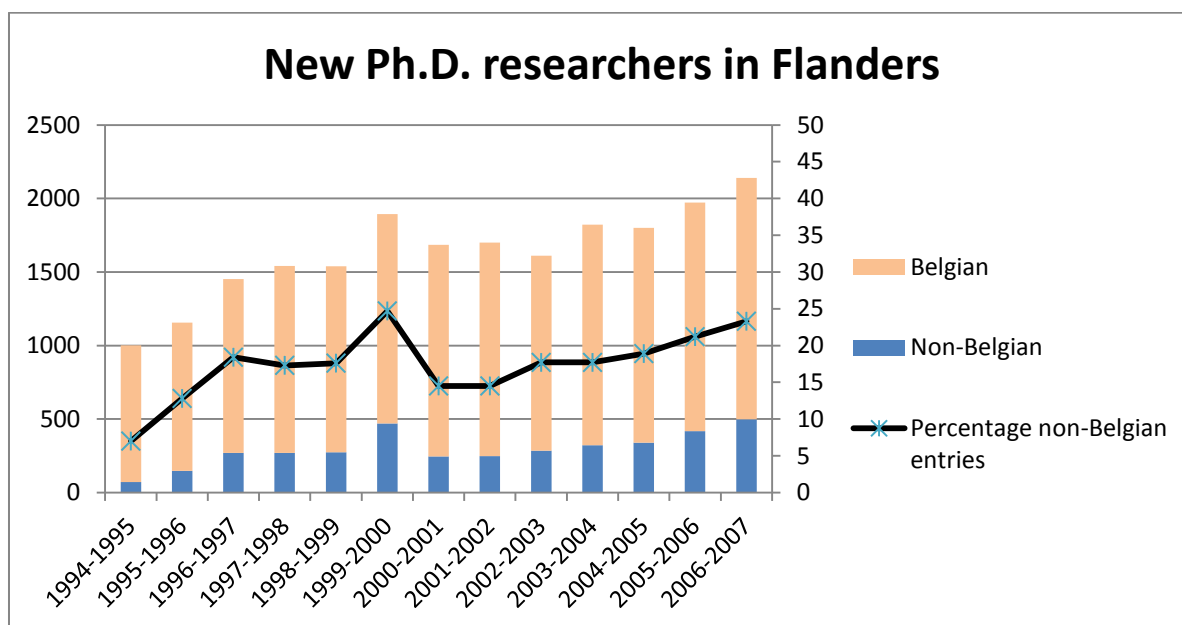
- (2) “Survey of Junior Researchers” – a questionnaire sent out to early-stage researchers at four of the five Flemish universities; report in Dutch published in 2009.
- (3) “Quality of living for foreign researchers in Flanders” – a study commissioned by the Minister for Economics, Science and Innovation in 2008.

Projects (1) and (2) are the work of the ECOOM policy research centre of the Flemish Government at Ghent University, commissioned to carry out research on human capital for innovation. Project (3) was commissioned to investigate what elements other than salary might make Flanders attractive to foreign researchers, and which legal and administrative barriers need to be overcome in order to facilitate their integration. The majority of data collection on international mobility and analyses was carried out by my colleague Annik Leyman. The analyses based on the HRRF database are still in progress. So far only the doctoral training phase of academic careers in Flanders, and not yet the senior levels of academia, have been mapped in this database.

The main findings from the above studies are the following:

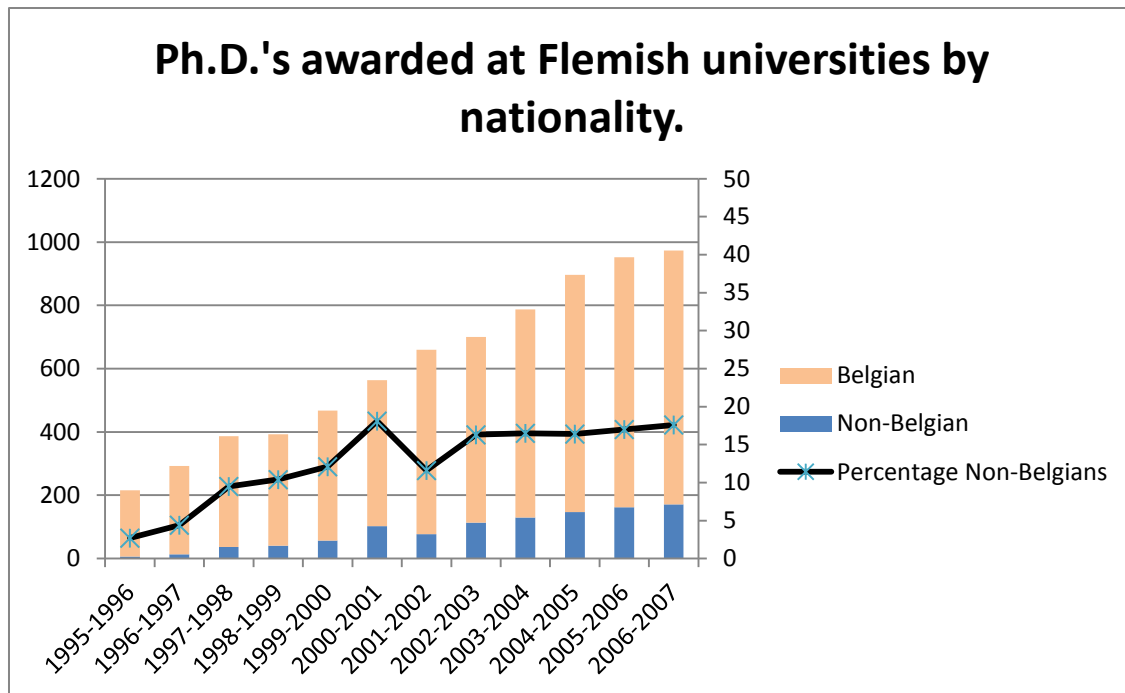
Quantitative data on Ph.D. researchers:

- The number of foreign researchers entering Flemish universities at Ph.D. level has doubled between 2001 and 2007, and increased almost tenfold since 1990-91. In relative terms this constitutes an increase from 14,5% of new non-national entries into academia in 2000-01 to 23% in 2006-07. This increase is due primarily to intra-European mobility, and an influx of early-stage researchers from Asia. Preliminary university data confirm that the trend towards higher mobility continues at senior levels of appointment in Flemish universities.



Source: ECOOM, HRRF database 2009.

- The number of Ph.D. degrees awarded at Flemish universities increased from 601 in 1995-96 to 1102 in the academic year 2006-2007. The share of foreign researchers during this period of increasing productivity rose from 2,7% to 17,6%.

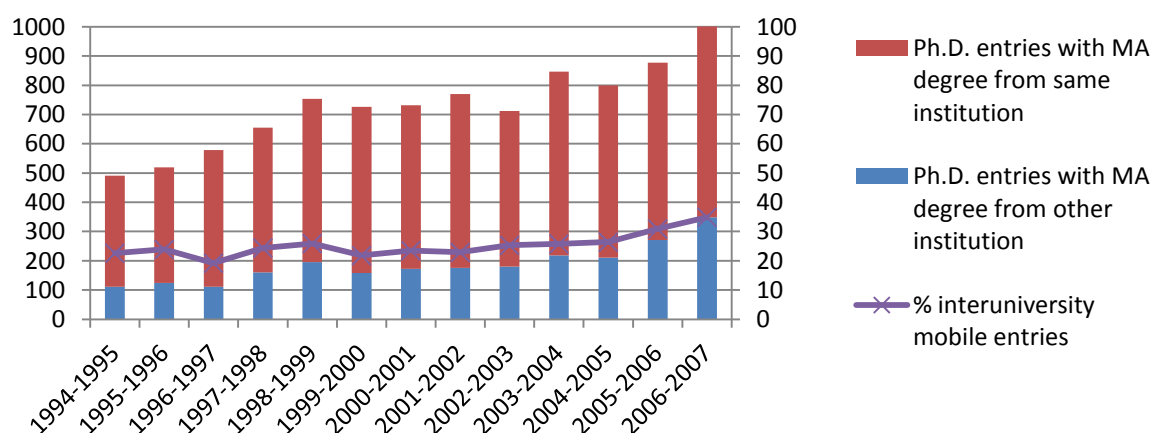


Source: ECOOM, HRRF database 2009.

Please note these data contain Ph.D.'s obtained by researchers entering university from 1990-1991 onwards. Ph.D. researchers who entered academia before this date, and also completed their Ph.D. Between 1995 and 2007, are not included in this graph.

- Perhaps surprisingly, the rate of interuniversity mobility in Flanders at Ph.D. level changed far less during this period of 'increased internationalization and openness'. Comparing the graph above with the one below suggests that promoting mobility at entry-point of Ph.D. research was focused on attracting researchers from abroad, and did not result in increasing brain circulation amongst universities in Flanders. In the most recent year of available data, still 65% of Ph.D. students starting an academic career at a Flemish university had also obtained their master's degree from the same university. More detailed data (ECOOM, HRRF database yet unpublished) even indicate that interuniversity mobility levels are lowest amongst Ph.D. students with the most competitive doctorate scholarships. This suggests that at the Ph.D. entry level the 'scouting tradition', according to which professors select their best master students and assist them in applying for prestige scholarships, is still more prevalent than open and transparent recruitment practices to attract the best talent worldwide.

Interuniversity mobility at Ph.D. entry level (3/5 Flemish universities)



Source: ECOOM, HRRF database 2009. Please note that the data in the above graph are based on the statistics of only 3 of the 5 universities, as missing data in the other 2 universities misrepresented the result.

Survey of junior Researchers

Researchers at Ph.D. level at four of the Flemish universities were asked about their mobility experience and their intentions to be mobile for the purpose of carrying out research. Less than 15% indicated they had spent a period of minimum 1 month abroad for the purposes of their research. As many respondents were still at an early stage of their research career, this may not be surprising, but more than 65% indicated they had little or no intention to spend any research time of at least a month's duration abroad. Amongst those who did want to go abroad, a clear correlation was found with the intention to establish a career in academia. Funding seemed to be no obstacle as only 12% of Ph.D. researchers with mobility experience indicated to have (co)financed this themselves (Leyman et al, 2009).

	Mobility experience	Future mobility intentions
Applied sciences	16,9%	64,7%
Sciences	16,2%	69,3%
Humanities	14,9%	66,1%
Social and Behavioural Sciences	11,0%	63,2%
Biomedical Sciences	9,0%	58,8%

Total	13,5%	64,4%
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Source: ECOOM, Survey of Junior Researchers (2009).

More than 90% of mobile researchers pointed out the professional as well as personal benefits of this experience when asked about the outcome of their research stay abroad: the experience enlarged their knowledge, enhanced their career perspectives, triggered new insights and expanded their network, in addition to enriching them personally and making them more mature as a researcher. The secondary impact on the young researcher's environment at the home institution (e.g. interest from colleagues in their experience – 83%, knowledge transfer to the research team – 70%) were also significant for many, but less so than the first-hand personal experience. The duration of their mobility experience had little impact on the perceived outcome of the experience (Leyman et al, 2009). The main obstacles before, during or after the mobility experience were identified as follows: partner (65%, and more so for female than for male researchers), time pressure or commitments at home institution (46%), accommodation in host country (39%), administration (37%), lack of information (36%) and lack of professional guidance/supervision in host institution (36%). Significantly, of those researchers who stated they had no intention to be internationally mobile, 1 out of 2 indicated there would be no added value for their research, and 1 out of 3 stated their Ph.D. supervisor did not allow them to go abroad.

Qualitative data on foreign researchers in Flanders

The motivations for researchers to be mobile for a significant period of time, as suggested in interviews with foreign researchers based in Flanders, confirms Enders & Musselin's (2008) empirical evidence that the international experience is used in different ways:

- for top researchers to occupy a strategic position in the best labs (and vice-versa: for universities to maintain a strategic position by attracting these researchers);
- for junior researchers to increase their career opportunities when returning home;
- as a second choice, because of a lack of career options at home;
- with the hope to go "from poor to rich".

Take, for example, the following statements:

"This lab is one of the best ones in my field so that is why I chose to come here." (postdoc from Spain)

"There's a view that you're not worth anything in Australia unless you go overseas for a while." (postdoc from Australia)

"... if you ever want to go back to Spain to have a decent position you have to spend at least two years abroad..." (postdoc from Spain)

"[I came here]... to have experiences with the modern technology and modern tools which are not easily available in all the labs in India." (postdoc from India)

Quality of life and level of salary proved to be additional benefits, especially for researchers from outside the EU or from Southern European countries:

"Quality of life is more important for long term, for short term it is less important..." (postdoc from Greece).

A number of foreign researchers at Flemish institutions (both at postdoctoral and professor level) were however struck by the closed nature of the research teams they have become part of:

“Most of the people who study here, did their PhD and postdoc here and got a group leader position here. They never actually saw how you can do it in a different way. The quality of the people in terms of how well they are educated - all these things are excellent. It’s all a bit sleepy, that’s the main limitation, actually, of the research. Compared to other countries it’s still very local and provincial in a way because you stay cut off from the best of the international pool of researchers.” (foreign professor)

Strategies at Flemish institutions to welcome or to integrate foreign researchers do not seem to correspond with the policy views on attracting more and better researchers from abroad:

“The reception of foreign researchers is not well organized here. You need some kind of support – something you would like to have when you’re a foreigner coming to a country. It’s really annoying if you lose days just to get your registration done.” (foreign postdoc)

What do these data tell us about mobility and excellence?

The key question inspired by the situation in Flanders, where research policies promote mobility as a vehicle towards excellence, is: “Are researchers excellent because they are mobile, or mobile because they are excellent?” Although it may be impossible to provide a single answer to this question, posing the question from the perspective of a region like Flanders opens up a new way of looking at the “mobility mantra” current in European higher education institutions. It is true that excellent researchers are often highly mobile researchers, moving to the institution that provides the best research facilities, prestige or environment to carry on their work. The survey amongst junior researchers and interviews with senior researchers confirm the view that mobility in general provides a boost to research quality and research intensity. As with other outcomes of excellence, such as an impressive publication record in high-impact journals or a high H-index, there is however a risk that mere symptoms of excellence are confused with actual criteria for excellence. Undoubtedly, there is a correlation between mobility and excellence, but this correlation has not been sufficiently examined to assume a causal relationship, and as Cruz-Castro and Sanz-Menendez (2010) have pointed out, meso-level institutional dynamics (e.g. conditions for promotion, mobility funding, selection criteria) have to be taken into account.

The above data urge us to make a distinction between virtual mobility and short-term mobility on the one hand, and long-term mobility on the other. Virtual mobility such as global networking, exchanging problems, ideas and feedback internationally, and communicating by means of modern media with colleagues all over the world, are generally assumed to be beneficial to a researcher’s productivity and quality. The same goes for short-term mobility (e.g. attending international conferences, carrying out research visits and meeting international colleagues). Generally, virtual and short-term mobility do not generate any conflict with an academic’s employment status or personal well-being. The situation is very different for long-term mobility, in particular in countries where mobility is not a common practice in the wider labour market.

Geographical and vertical mobility

The policy focus on long-term mobility, in an academic system which for decades was characterized by internal recruitment and promotion, created a situation of tension for young researchers between loyalty to the institution and research team on the one hand, and the challenge to take control of one's career by breaking the ties with the home institution. Their supervisors had acquired their position in the Humboldtian apprenticeship model, being slowly but surely groomed into the life of an independent academic, until rewarded for their loyalty when the research head retired and they could take over. At that time, leaving the university for a considerable length of time might have been considered as a sign of disloyalty to the research team and involved a risk of missing out on promotion or funding opportunities at the home institution.

Traditionally, in closed university systems, a researcher's mobility would typically have been short-term, in institutions or with colleagues who were already part of the research team's professional network, and during a particular phase of the academic career – not corresponding with an entry into a new phase of the career. As these closed systems started to develop into more open, and more competitive academic organizations (and as more and more researchers entered academia), two different dynamics started to take place for the new generation of researchers who had the ambition to further pursue an academic career: first, loyalty to one's institution was no longer sufficient as a guarantee to make progress in an academic career. Second, increased mobility funding provided access to a vast range of other academic environments. Even if these institutions did not turn out to become future employers, at least the mobility experience in itself and association with experts in the field would increase a researcher's market value when applying for academic jobs. Short-term mobility, returning to the same academic position that one started from, began to make way for longer-term mobility, and long-term mobility coincided more and more with 'vertical mobility'.

The motivation for mobility can be positive (e.g. attractive research facilities, proximity to experts in the field) or negative (lack of career opportunities in home country), and the outcome is generally more complex than for virtual or short-term mobility. The impact on a researcher's immediate environment is considerable (family pressure, breaking ties with former colleagues), practical obstacles are significant (immigration, accommodation) and the reported benefit, according to a number of researchers in Flanders, is characterized more by structural change (academic position, salary) than by a change in research quality or a spill-over effect on the mobile researcher's new environment – although the long-term effect may be different and has not yet been assessed.

Mobility for mobility's sake

Despite the lack of evidence for a causal relationship between long-term mobility and research excellence, the mobile behaviour of some top researchers and the closely monitored competition between universities for buying in the best talent (in particular nobel prize winners and highly-cited researchers) has transferred these 'excellence' connotations onto all types of mobility. Top researchers are mobile, *because they 'can' be mobile*. They do not need to be encouraged to be mobile; their own excellence (and possibly their vanity) draws them to the location that offers the best research facilities, the highest prestige and whatever other priorities they may choose to have. The less outstanding researchers, as well as promising researchers in the process of establishing their career, *are often forced to be mobile* because not being mobile is associated with a culture of 'inbreeding', lack of ambition, and lack of excellence. Whether their research quality actually

improves as a result of this mobility, cannot be investigated properly, for two reasons: first of all, non-mobile researchers tend to drop out more easily (amongst them, certainly excellent researchers) which distorts any measurement of the potential impact of mobility on research quality. Second, as geographical mobility more often than not corresponds with 'vertical' mobility, an increase in research productivity and scientific impact is a natural consequence of academic promotion. Any analysis of a correlation between mobility and excellence first needs to address the problems of this selection effect and of mobility for mobility's sake type of behaviour.

This impression of mobility behaviour amongst academics in Flanders does not imply that mobility ought to be discouraged – on the contrary. It does show that a single focus on attracting top talent from abroad without for example striving to recruit more openly at Ph.D. level in general, is not sufficient. Nor is it healthy to promote mobility behaviour as a sacrificial example of one's ambitions as an academic rather than as an opportunity to challenge one's own knowledge with that of other experts in the field.

This paper does recommend that if governments, institutions and individual researchers invest in mobility, the added value of this mobility experience must be defined outside of the experience of mobility itself. Unless the objectives of mobility initiatives are clearly outlined and can be measured in terms of its quality and relevance, the "mobility mantra" risks creating an expensive self-fulfilling prophecy of mobility for mobility's sake. Whatever can be done to make closed recruitment practices in academia a thing from the past, must be done, but promoting mobility is only one of the many measures to be taken to achieve this, along with structural changes, new management responsibilities, transparent recruitment processes and effective career services.

In addition to current investigations into researchers' mobility concentrating on advantages and obstacles, or on policy motivations, this paper confirms views emerging elsewhere (Cruz-Castro & Sanz-Menendez, 2010) that now it is time to focus on the actual outcome of mobility behaviour and on the quality of the mobility experience, two elements which mark the focus of the next phase in our research centre.

Barron, B. (1993) The Politics of Academic Mobility in Western Europe. *Higher Education Policy*, 6:3.

Cruz-Castro, L. & Sanz-Menendez, Luis (2010). *Mobility versus job stability: Assessing tenure and productivity outcomes*. *Research Policy* 39, 27-38.

ECOOM, Human Resources in Research database (HRRF).

ECOOM (2009). Survey of Junior Researchers.

Enders, J. (2001). *Academic staff in Europe. Changing contexts and conditions*. Westport, Conn: Greenwood Press

Enders, J. & Musselin, C. (2008). *Back to the future? The Academic Professions in the 21st Century*. Higher Education to 2030. Volume 1: Demography. OECD.

Enders, J. & de Weert, E. (2009) *The Changing face of academic life. Analytical and Comparative Perspectives*. London: Palgrave.

European Commission (2000). *The Lisbon European Council – an agenda for economic and social renewal for Europe*. DOC/00/7.

European Commission (2007) *The European Research Area: New Perspectives. Green Paper*. COM (2007) 161 final.

European Commission (2008). *Betere loopbanen en meer mobiliteit: een Europees partnerschap voor onderzoekers*. Mededeling van de Commissie aan de Raad van het Europees Parlement.

Horta, H. (2009). Global and national prominent universities: internationalization, competitiveness and the role of the state. *Higher Education*, 58, 387-405

Leyman, A., Vandeveld, K., Lemahieu, I. & De Boeck, P. (2008), *Levenskwaliteit van buitenlandse onderzoekers aan Vlaamse universiteiten en kenniscentra. Rapport aan de Vlaamse minister van Economie, Ondernemen, Wetenschap, Innovatie, en Buitenlandse handel*.

Leyman, A., De Grande, H., Jidkova, S. V., Van der Goten, G., Jacobs, S., De Boyser, K., Vandeveld, K. (2009). *OnderZOEKEN = OnderVINDEN. Resultaten van de 'Survey of Junior Researchers' aan de UA, UGent, UHasselt en VUB*. (ECOOM-UGent).

Leyman, A., Jidkova, S. V., De Grande, H., Van der Goten, G., Van Rossem, R., & Vandeveld, K. (2009). *Resultaten van de "survey of junior researchers" aan de UGent*. Gent. HR2.

Leyman, A., & Vandeveld, K. (2009). *Very Important Brains : buitenlandse onderzoekers aan Vlaamse universiteiten en kenniscentra*: Gent. HR2.

Musselin, C. (2004). Towards a European academic labour market? Some lessons drawn from empirical studies on academic mobility. *Higher Education*, 48, 55-78

Van Rossem, R., Vandeveld, K., De Grande, H. (eds) *Kennis in wording. Het Vlaamse onderzoeks- en innovatiepotentieel*. (2009). HR2.

Vlaamse Regering (2009). *Beleidsnota 2009-2014. Wetenschappelijk onderzoek en innovatie*.

VRWB (Vlaamse Raad voor Wetenschapsbeleid) 1998a. *Aanbeveling 16: Het Europese opleidings- en mobiliteitsprogramma voor onderzoekers*.

VRWB (Vlaamse Raad voor Wetenschapsbeleid) 1998b. *Commentaar 3: Commentaar bij de aanwezigheid van buitenlandse vorsers aan Vlaamse universiteiten*.

VRWB (Vlaamse Raad voor Wetenschapsbeleid) 2005. *Aanbeveling 25: Mobiliteit van studenten, onderzoekers, hooggeschoolden en gespecialiseerde technici van buiten de Europese Unie*.

VRWB (Vlaamse Raad voor Wetenschapsbeleid) 2005. *Advies 91: Onderzoek op wereldniveau - kansen voor toptalent*.

VRWB (Vlaamse Raad voor Wetenschapsbeleid) 2008. *Advies 125: Het Europees partnerschap voor onderzoekers*.

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